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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,838	07/31/2003	Seiichiro Fujioka	Q76718	1975

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SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

PATEL, ASHOK

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary**

Application No.

10/630,838

Applicant(s)

FUJIOKA ET AL.

Examiner

Ashok Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 05/12/05.
- 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the bar shaped electrodes, as recited in claims 8-11, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

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corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Claims 1-3 are objected to because of the following informalities: claim 1, line 6; claim 2, line 2; and claim 3, line 2: the term "composed" should be corrected to --composed of--. Appropriate correction is required.

3. Claims 2, 9, 13 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "the nitride treatment" lacks antecedent basis. This term is not defined or mentioned earlier anywhere in the same or parent claim.

Claims 9, 13 and 17 are necessarily rejected since they depend upon claim 2.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Heuvelmans et al (USPN 5,841,222).

As to claims 1-3, Heuvelmans et al disclose applicant's claimed cold cathode lamp (Figures 1-2) including: electrodes (20) fixed on respective ends of a glass tube (10); and a rare gas or a rare gas and mercury vapor (col. 3, lines 20-22) sealed in the glass tube; wherein at least surfaces of the electrodes are composed of nitride of at least one of titanium zirconium (Zr), hafnium (Hf), niobium and tantalum (Ta) (col. 2. lines 25-32, claim 3).

As to claim 2, it recites formation of the nitride by nitriding treatment of the electrode surfaces, which renders the claim of product-by-process nature. The courts have been holding that: "--In spite of the fact that a product-by-process claim may recite only process limitations, it is the product which is covered by the claim and not the recited process steps.-- In re Hughes, 182 USPQ 106--". Also --Patentability of a claim to a product does not rest merely on a difference in the method by which that product is made. Rather, it is the product itself, which must be new and unobvious. In re Pilkington, 162 USPQ 147--." Accordingly, "--a rejection based on 35

U.S.C. section 102 or alternatively on 35 U.S.C. section 103 of the statute is eminently fair and acceptable." In re Brown and Saffer, 173 USPQ 685 and 688. --The determination of the patentability of product-by-process claim is based on the product itself rather than on the process by which the product is made--. In re Thrope, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985).

As such, no patentable weight is given to process steps recited in claim 2.

As to claim 4, Heuvelmans et al disclose the electrodes coated (covered) with the nitrides (col. 2, lines 28-32).

As to claim 5, Heuvelmans et al disclose the cross-section of the glass tube perpendicular to the length direction having a true-round ring shape.

As to claim 7, Heuvelmans et al disclose, in Figure 1, the glass tube coated with the fluorescent material (11).

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Siegle (USPN 3,956,657).

As to claims 1-3, Siegle discloses applicant's claimed cold cathode lamp (the sole Figure) including: electrodes (11) fixed on respective ends of a glass tube (10); and a rare gas or a rare gas and mercury vapor (col. 6, lines 25-29) sealed in the glass tube; wherein at least surfaces of the electrodes are

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composed of nitride of at least one of titanium (Ti), zirconium (Zr) and hafnium (Hf) (col. 5. lines 23-41).

As to claim 2, the Examiner does not give a patentable weight to the process steps recited in claim 2 for reasons set forth earlier in this office action.

As to claim 4, Siegle discloses the electrodes coated with the nitrides (col. 5. lines 23-41).

As to claim 5, Siegle discloses the cross-section of the glass tube perpendicular to the length direction having a true-round ring shape.

7. Claims 1-5, 7 and 12-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada et al (USPN 6,172,453).

As to claims 1-5, Hamada et al disclose applicant's claimed cold cathode lamp (Figures 2-4, and 9-14; col. 1, lines 28-36; 54-65; col. 13, lines 34-65; col. 15, line 19 to col. 17, line 53) including: electrodes (24, 25, 27) fixed on respective ends of a glass tube (21, 3); and a rare gas or a rare gas and mercury vapor (col. 1, lines 43-44; col. 2, lines 12-20; lines 49-55 etc.) sealed in the glass tube; wherein at least surfaces of the electrodes are composed of nitride of at least one of zirconium (Zr), Tantalum (Ta), hafnium (Hf) and Niobium (Nb) (at least at col. 13, lines 60-65).

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As to claim 2, the Examiner does not give a patentable weight to the process steps recited in claim 2 for reasons set forth earlier in this office action.

As to claim 4, Hamada et al disclose the electrodes coated with the nitrides (col. 13. lines 60-65).

As to claim 5, as shown in all drawing Figures, Hamada et al disclose the cross-section of the glass tube perpendicular to the length direction having a true-round ring shape.

As to claim 7, Hamada et al disclose the glass tube coated with the fluorescent material (col. 1, line 45; col. 15, lines 36-38).

As to claims 12-15, Hamada et al disclose the electrodes as tubular (Figure 4b; 9b, 12b, 13b).

As to claims 16-19, Hamada et al disclose the electrodes being cup-shaped (Figure 4b; 9b, 12b, 13b). The cup shaped electrodes include tubular shape at some extent.

As to claims 20-22, Hamada et al disclose a device as an electronic device including the cold cathode lamp (as mentioned earlier in the rejection of claim 1) as a backlight lamp of a display unit (LCD) (col. 1, lines 4-27).

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37.CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 6, 8-11 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al, as applied to claim 1.

As to claim 6, Hamada et al do not disclose the glass tube having a rectangular shape, as claimed by applicant. However, it would have been obvious to one of ordinary skill in the art to provide any different suitable shape to the glass envelope as long as it is compact in size and as long as it is able to fit within another device as a backlight lamp. In light of this, Hamada et al would have suggested to one of ordinary skill in the art to make the glass envelope of any suitable shape in the disclosed device.

Further, as to claim 6, it is however noted that rectangular shape of the glass tube does not solve any particular problem, or does not yield any unexpected result,

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that is not within the scope of prior art cold cathode lamp device. Accordingly, the claimed rectangular shape of the glass tube would have been a matter of obvious design choice to one of ordinary skill in the art at the time the invention was made.

As to claims 8-11, Hamada et al do not disclose the electrode having a bar-shape, as claimed by applicant. However, it would have been obvious to one of ordinary skill in the art to provide any different suitable shape of the electrode for emitting electrons as long as it performs same function during operation of the lamp. In light of this, Hamada et al would have suggested to one of ordinary skill in the art to provide the electrode of any suitable shape.

Further, as to claims 8-11, it is however noted that rectangular bar-shapes electrode does not solve any particular problem, or does not yield any unexpected result, that is not within the scope of prior art cold cathode lamp electrode. Accordingly, applicant's claimed bar-shaped electrode would have been a matter of obvious design choice to one of ordinary skill in the art at the time the invention was made.

As to claim 23-26, applicant is claiming the electronic instrument of claim 20 utilized for a reading unit (an image scanner or specifically pen-type scanner or more specifically a digital high scanner). It has been held that a recitation with

respect to the manner in which a claimed apparatus is intended to be employed/used does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Further, regarding claims 23-26, applicant's claimed limitation of a reading unit (an image scanner or specifically pen-type scanner or more specifically a digital high scanner) has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus (cold cathode lamp) is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Further, regarding claims 23-26, the limitation (a reading unit or an image scanner or specifically pen-type scanner or more specifically a digital high scanner) is intended use limitation. A recitation of the intended use of claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim, *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hamada et al (USN 5,982,088) is cited for showing a general structure of cold cathode lamp.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel whose telephone number is 571-272-2456. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ashok Patel  
Primary Examiner  
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